

# NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

## **FACT SHEET** (pursuant to NAC 445A.874)

Permittee Name: **Rebel Oil Company**  
Permit Project: **Rebel Station #65**  
Permit Number: **UNEV2000209**

### **A. Description of Injection**

Location: The single network of nine (9) injection wells is located at 1720 West Charleston Boulevard, Las Vegas, Nevada 89102 in the SW<sup>1</sup>/<sub>4</sub> of Section 33 within T20S, R61E, MDB&M, in Clark County.

Characteristics: The injectate will consist of a 3 % hydrogen peroxide solution prepared with dechlorinated water. The water used for the solution will be obtained from a fire hydrant located near the site. The water will be dechlorinated utilizing 15 grams of Pentahydrate sodium thiosulfate per 250 gallons of water. This generates a 0.0001 molar solution. Pentahydrate sodium thiosulfate ultimately reacts with chlorine to form sodium chloride. Because the concentration of the solution is very low, an increase in TDS is not expected to be significant, but will be monitored. Injection activities will include 3 % hydrogen peroxide solution injected at no more than 1,500 cumulative gallons per quarter into nine (9) injection wells.

### **B. Synopsis**

Rebel Station #65 currently functions as a gasoline station. The Nevada Division of Environmental Protection issued a letter to Rebel #65 contending that reports had been received by the Division indicating a MTBE plume was emanating from the Rebel #65 property. A site characterization was subsequently performed in July 1999 which confirmed the presence of MTBE in both the on-site soil and groundwater. The release was determined to be light-end petroleum hydrocarbons typical of gasoline. (See Section C for Receiving Water Characteristics) The hydrogen peroxide solution will be injected at very low flow rates and volumes and is consequently not expected to facilitate contaminant migration. Monitoring will be required to verify that the injection activities are not causing the contamination to migrate.

### **C. Receiving Water Characteristics:**

hydrocarbons in excess of the State and Federal action levels. The petroleum hydrocarbons are associated with a leaking UST containing unleaded gasoline.

The geology encountered during well construction at the site consists of a sequence of sands, silts and sandy clays alternating with layers of caliche from land surface to approximately 25 feet below land surface. Groundwater is present at approximately 12 feet below ground surface and the average local gradient is estimated to be approximately 0.004 ft/ft in the easterly direction.

The groundwater quality at this site has demonstrated the following concentrations as determined by samples collected in March 2000:

<b>Constituent</b>	<b>Existing Groundwater Concentration</b>	<b>Applicable Limit</b>
Benzene	48 ppb	5 ppb
Toluene	2.9 ppb	100 ppb (State Limit)
Ethylbenzene	200 ppb	100 ppb (State Limit)
Xylenes (total)	36 ppb	200 ppb (State Limit)
MTBE	1,500 ppb	200 ppb (Site Specific Target Level)
Nitrate as N	8.2 ppm	10 ppm
Iron	2.1 ppm	0.6 ppm
TDS	2,100 ppm	1,000 ppm

**D. Procedures for Public Comment**

Notice of the Division's intent to issue a permit authorizing the facility to inject into the groundwater of the State of Nevada will be sent to the Las Vegas Review Journal for publication.

The notice will be mailed to interested persons on our mailing list (Please refer to Attachment B). Anyone wishing to comment on the proposed permit can do so in writing for a period of 30 days following the publication date of the said public notice. The comment period can be extended at the discretion of the Administrator. All written

comments received during the comment period will be retained and considered in the final determination.

A public hearing on the proposed determination can be requested by the applicant, any affected state, any affected interstate agency, the regional administrator of EPA Region IX or any interested agency, person or group of persons.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings will be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

**E. Proposed Determination**

The Division has made the tentative determination to issue the proposed permit for a five year period.

**F. Proposed Limitations and Special Conditions**

PARAMETER	FREQUENCY	LOCATION	LIMITATIONS
Benzene, Toluene, Ethylbenzene, total Xylenes (BTEX), and methyl tertiary butyl ether (MTBE)	Quarterly (Samples shall be taken no sooner than 10 days following injection event)	RMW-1, RMW-2, RMW-4, RMW-5, MW-4, MW-5, MW-6 and MW-8	Monitor and Report
Dissolved Oxygen and pH	Quarterly	RMW-1, RMW-2, RMW-4, RMW-5, MW-4, MW-5, MW-6 and MW-8	Monitor and Report

Iron II	Quarterly	RMW-1, RMW-2, RMW-4, RMW-5, MW-4, MW-5, MW-6 and MW-8	Monitor and Report
<b>PARAMETER</b>	<b>FREQUENCY</b>	<b>LOCATION</b>	<b>LIMITATION</b>
TDS	Quarterly	RMW-1, RMW-2, RMW-4, RMW-5, MW-4, MW-5, MW-6 and MW-8	Monitor and Report
Hydrogen peroxide: Concentration Volume per Well Date Injected	Each Injection Event	All Affected Injection Wells	3 % Solution with a maximum of 1,500 gallons every quarter
Groundwater Elevation and Depth to Groundwater	Quarterly	All Site-Related Monitoring Wells	Monitor and Report

**G. Rationale for Permit Requirements**

The permit conditions will help to ensure that the injectate does not adversely affect the existing water quality or hydrologic regime.

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